

ing demand. We cannot doubt, therefore, that an American issue of the work would meet with an equally favourable reception. Too much can hardly be said in its praise, as a practical essay upon a class of derangements but little studied, and less understood, although of frequent recurrence amongst us; for every inquiring student of these affections will find in its pages valuable precepts for their management, and many satisfactory explanations of the obscure and complex phenomena which usually attend them. The original genius of the author may justly be urged in extenuation of the theoretical errors, which, to some extent, mar the perfection of his work. We conceive the chief of these errors to be an attempt to build a systematic classification upon uncertain chemical hypotheses on the one hand, and mere symptomatic differences on the other. Our author has not, indeed, adopted the conclusions of other observers, who from the vantage ground first reached by himself, have, in some respects, advanced still further than their predecessor; but let it not be forgotten that Dr. Prout deserves the credit of leading the way in the investigation of renal diseases, and that we are bound to feel grateful to him for what he has accomplished, rather than blame him for adhering, somewhat tenaciously, to his early and peculiar opinions.

A. S.

ART. XI.—*The Theory and Practice of Midwifery*. By FLEETWOOD CHURCHILL, M. D., M. R. I. A. &c. &c. *With Notes and Additions*, by ROBERT M. HUSTON, M. D., &c., with one hundred and sixteen illustrations from drawings by Bagg and others; engraved by Gilbert, 8vo. pp. 519. Philadelphia: Lea & Blanchard, 1843.

If the student of obstetrics should not, at the present day, become well grounded in the principles and practical precepts of the art, it will not be for the want of ample and efficient guides. The elementary knowledge necessary to prepare him for becoming a skilful and successful accoucheur, is now placed fully within his reach, and so plainly and explicitly defined, and ably illustrated, that his own stupidity or indolence, can alone prevent him from becoming a perfect master of it. In nothing has the medical press, within a few years past, been more fruitful than in elementary treatises and manuals of the theory and practice of midwifery, by gentlemen of skill and experience; while ingenuity has been taxed and all the various plans of illustration have been brought into requisition to render its theoretical precepts familiar, and its practical rules plain and explicit. A very respectable library might be formed of recent works on the obstetric art, each excellent in its kind, and the whole presenting a vast body of facts, precepts, and illustrations, affording important aids to the student, in the acquisition of obstetrical knowledge, and to the practitioner, in increasing his qualifications to afford efficient aid in the hour of suffering and of peril. Among these works we should assign a very high rank to the treatise of Dr. Churchill. This gentleman is already favourably known to the medical profession of this country by his two very excellent works on the Diseases of Females—a notice of which we gave to our readers soon after their appearance. The favourable impression formed of the author in this country,

as an accurate eclectic and well informed practitioner, will in no degree be impaired by the work before us. Presenting a very faithful exposition of the present state of obstetrics, and a full analysis of the opinions and experience of its most distinguished and successful cultivators, it will quickly find its way, as a useful manual, into the hands of the students and practitioners of the art. For although it may not supersede the necessity of an intimate acquaintance with the other standard works upon the principles and practical rules of midwifery, it is, nevertheless, well adapted to facilitate the study of these, and to recall subsequently the more valuable portion of their contents.

The work is divided into three parts. The first embracing the anatomy of the pelvis and organs of generation—the second the physiology of the organs of generation—and the third, the physiology of the uterus, or parturition.

The first part treats as well of the abnormal, as of the normal, anatomy of the pelvis and of the external and internal organs of generation, and presents a faithful and succinct exposition of every important particular in respect to these subjects that is necessary to be known by the practitioner; the whole illustrated by a number of most beautiful and extremely accurate wood engravings. In regard to the normal dimensions of the pelvis and the changes produced in these by various diseases of the osseous system, Dr. Churchill has given the measurements of all the leading obstetricians. Upon every point connected with the subjects embraced in this section, there will be found a sufficient degree of minuteness; while the details throughout are clear and explicit, and the general conclusions and practical applications plain and accurate.

The second chapter of part second, treats of menstruation and of its abnormal states. On the first, the author's account is full and interesting; in relation to the pathology and treatment of the several disturbances of the menstrual function, there is perhaps more conciseness than the importance of the subject, and the many gross errors which still exist in relation to it, would seem to demand. The principal subject of the volume being, however, the theory and practice of midwifery, it is only on those subjects having an immediate bearing upon the process of gestation and parturition that we are to expect more full details. The chapters which treat of generation, conception, and utero-gestation, embrace a notice of every well established fact in relation to these curious and important points of the physiology of the human female, and as explicit a notice as is necessary of the various opinions advanced in regard to them by leading physiologists. The ensuing chapter, on the signs of pregnancy, constitutes the first link of connection between the preliminary subjects and those immediately connected with the leading object of the work—the exposition, namely, of the present state of the theory and practice of midwifery.

In every point of view, it would be important to have in our power the means of determining, by some positive and unerring sign or combination of signs, the actual existence of pregnancy, at the earliest possible period of utero-gestation, as well as to be enabled, by certain phenomena, to ascertain its period and progress. While, however, in the early stage of pregnancy, it is impossible to determine with certainty its existence, and even at a later period there is much difficulty in arriving at a positive decision—yet, by a careful attention to all the phenomena incident to utero-gestation, the experienced practitioner will seldom be deceived in regard to its exist-

ence during the last three months. Dr. Churchill examines in detail the several signs of pregnancy, and exposes with great judgment their relative value.

Even as recent a writer as Rigby refers the sensation of quickening simply to the rising of the uterus out of the pelvis. Dr. Churchill adopts the explanation of the late Dr. Fletcher, of Edinburgh, of the reason why the movements of the fœtus are felt subsequently and not before this period, as upon the whole the most probable.

"The movements of the fœtus while the uterus is in the cavity of the pelvis are not perceived, because the uterus is not supplied with nerves of sensation, and it is surrounded by parts similarly deficient; but when it arises from the pelvis, it comes in contact anteriorly with the abdominal parietes, which are liberally supplied with sensitive nerves, and which by contiguity of substance, feel the movements, and thus the woman becomes conscious of them. This view is strengthened by the fact, of which I have been repeatedly assured, that the movements, unless when violent, are felt in front only."

These are certainly correct physiological reasons in favour of this explanation;—the absurd notion, that "the fluttering in the hypogastric region, often attended with sickness and faintness," that constitutes, in many cases, the sensation of quickening, is caused by "the sudden emergence of the uterus, towards the fourth month of pregnancy, from out the cavity of the pelvis," can have but few advocates at the present day.

Of the diagnosis of pregnancy—which in every point of view is an interesting and highly important subject—Dr. Churchill's conclusions are as follows:—

"The diagnosis of pregnancy in the early months must be more or less doubtful. No single sign can be relied on as conclusive; it is where two or three are present, and occur in proper sequence, that we can feel certain. For example: if a patient miss one or two (menstrual) periods, we may have grounds for suspicion, and these will be strengthened if morning sickness occur in the second month; but if to these be added enlargement of the breasts and darkening of the areola, the case will be pretty certain. In many cases, too, we may derive assistance from the character and circumstances of our patient. It is not, however, until the latter half of gestation that we obtain positive evidence, which can neither be simulated nor evaded."

We would warn the young practitioner against committing himself in deciding upon the existence or non-existence of pregnancy during the first four months, even when the presence or absence of all the usual signs appear to mark the case with the utmost certainty; we have known, more than once, the most ridiculous errors committed in this respect, and in one instance leading to very serious results. Probability may in many cases be obtained—absolute certainty, never.

In regard to the principal signs developed during the latter half of pregnancy—enlargement of the abdomen, quickening, the motions of the child, ballottement, and the results of auscultation, Dr. Churchill remarks:

"We find that while all are valuable, there is a degree of uncertainty attached to the three first which calls for a very careful estimate on our part: that the *positive* evidence of the latter modes of investigation is conclusive, but that the *negative* evidence or absence of the usual results, is no proof that the patient is not pregnant. So that, as before observed, we ought rather to depend upon the coincidence of two or more of the signs of pregnancy than attempt a diagnosis from any one alone: the only sign indeed which can be regarded as itself proving that the woman is pregnant of a living child, is the pulsation of the fœtal heart."

Of the value of *kiesteine*, as a test of pregnancy, Dr. Churchill offers no decided opinion, he merely presents the observations of Nauche, Eguisier, Montgomery, and Bird, and refers to future and more extended researches to confirm their accuracy. The results of Dr. E. K. Kane's observations made in the Philadelphia Hospital are added by Dr. Huston. The author notices, without comment, the test of Jacquemin, a violet colour, namely, of the vagina and labia. The results of Jacquemin's observations are confirmed by M. Parent Duchatelet.

The chapters on the Duration of Pregnancy, and Sterility, comprise a brief exposition of all the well established facts in relation to either subject; in his estimate of which the author exhibits his usual judgment and caution.

Dr. Churchill denies the possibility of superfœtation. After a brief review of the several facts adduced in evidence of its occurrence, he remarks:

"The real difficulties of such a theory appear insurmountable."—"Shortly after conception, the uterus is lined by the deciduous membrane, a shut sac, closely adherent to the lining membrane of the uterus throughout, and covering the orifices of the fallopian tubes; that the canal of the cervix uteri is, during pregnancy, plugged with thick tenacious mucus secreted by the gland; now, if this be the case, and if it be an essential condition of generation, that the spermatozoa pass through the fallopian tubes to the ovaries, it is evident, that the theory of superfœtation involves so much apparent physical impossibility, that it must be rejected, unless it can be shown how the spermatozoa can obtain access to the ovaries, when the uterus is, as it were, hermetically closed."

"In conclusion, I would say, 1. That the theory of superfœtation is *unnecessary* to explain the birth of a mature fœtus and blighted ovum; of a mature and immature fœtus, born together, or within a month of each other; or of fœtuses of different colours, as they may reasonably be supposed to be the product of one act of generation, or of two, nearly contemporaneous. 2. That, in cases of double uterus, it is possible for a second conception to take place, and—judging from the subsequent birth of the second child, in the only case on record—at a later period than the first. 3. That, in the remaining cases, where one mature child succeeded the birth of another after a considerable interval, we have no proof of a double uterus in any, and positive proof, in one case, it was single, and that to the explanation of these cases, no theory as yet advanced, is adequate: that of superfœtation being opposed by physical difficulties, which are insurmountable in the present state of our knowledge."

There is much force, and a great deal of good sense in these remarks of the author.

On the subjects of extra-uterine pregnancy—and on the signs of the death of the fœtus, a very admirable summary of the present state of our knowledge will be found in chapters 9 and 10. The subjects of chapter 11, are abortion and premature labour—which are treated with the usual judgment of the author. We are surprised to find him declare that, in arresting the flooding consequent upon abortion, he has not seen much benefit result from the use of acetate of lead. We have had a good deal of experience of the effects of the remedy in these cases, and must say, that it has appeared to us invariably to exert a very powerful influence in arresting the hæmorrhage—we have employed it by itself, in doses of three grains every two hours; in grain doses, combined with the third of a grain of ipecacuanha every hour, and in doses of three grains, with half a grain of opium, and the third of a grain of ipecacuanha, every three hours—and have, in no instance, been disappointed in its effects.

In addition to Dr. Churchill's remarks on the prevention of abortion, the

editor adds, that he has "succeeded in some very obstinate cases, by confining the patient to her sofa, commencing some time before the usual period of miscarriage, and continuing several weeks after the time had gone by—carefully avoiding the erect position, and all unnecessary muscular exertion, and using, at the same time, injections daily of opium, in sufficient doses to prevent uterine action—the quantity varying from two to five grains, in the state of powder, suspended in mucilage. By these means, a condition of tolerance, on the part of the uterus, is acquired, which allows gestation to go to the full term."

This we know, from experience, to be an admirable procedure. We may remark, that in some cases of threatened abortion, we have reason to believe the loss of the ovum was prevented by the application of a blister to the sacrum, upon the first appearance of symptoms indicative of an approaching miscarriage.

The chapter on abortion and premature labour closes the first two sections of Dr. Churchill's treatise. The subjects comprised in these sections are certainly treated in a very masterly manner; and notwithstanding some of the chapters may be deficient in very important details, the whole, nevertheless, constitutes one of the very best summaries with which we are acquainted; to beginners it presents a very valuable introduction to the study of the more extended treatises and monographs, while to the obstetrician busily engaged in the practice of his profession, it will be a useful remembrancer of the more important facts connected with the science, and a guide to the improvements introduced by the more recent investigators.

The remaining part of the treatise is devoted to a consideration of midwifery properly so called,—that is, parturition, with its abnormal varieties.

Dr. Churchill divides all labours into three general classes, natural, unnatural, and complex. Unnatural labour he divides into three orders. 1st, from abnormal condition of the expulsive force, including tedious labours; 2d, from abnormal condition of the passages, either obstructions from the soft parts or from distortion of the pelvis; 3rd, from abnormal condition of the child—either malposition, malpresentation, plurality of children, or monstrosity. Complex labours, include prolapse of funis, retention of placenta, flooding, convulsions, lacerations, and inversion of the uterus.

This arrangement, which is nearly the same as that followed by Merriman in his "*Synopsis of difficult Parturition*," merely substituting plain English names for the several classes and orders of labour in place of those adopted by Dr. Merriman, formed by a barbarous combination of Greek and Latin.

Dr. Churchill has presented a table of the relative frequency of the several fœtal presentations, in the practice of a number of distinguished obstetricians—by which it appears, that in an aggregate of 78,027 labours there were 73,647 head presentations, 1257 breech presentations, 1009 presentations of the inferior extremities, and 294 of the superior extremities.

The all-important subject of the mechanism of labour is considered in the second chapter. To this the author devotes considerable space, and very properly so—it is by his perfect acquaintance with the mechanism of parturition that the accoucheur is rendered competent to decide upon many of the more important questions connected with the condition and progress of labour; and in cases where the aid of instruments is required, it is in vain for him to attempt their application unless perfectly familiar with the

manner in which the fœtus enters and passes through the several parts of the pelvis. On every point connected with the mechanism of labour, the expositions of Dr. Churchill are perfectly clear and precise—he has adopted throughout the views of Professor Nægele of Heidelberg, which, in many particulars, differ materially from those of the generality of the French and English authorities on this subject, but we are convinced that when carefully examined they will be found to correspond very closely with what actually takes place in the major number of the cases of natural labour.

The author's description of natural labour (chapter 3) is marked by great minuteness and accuracy; we recommend it to be closely studied by every pupil of the obstetric art, and we are convinced that even the young practitioner would not find the time devoted to its attentive perusal altogether unprofitably spent. By becoming perfectly familiar with all the phenomena of natural labour he will save himself often much anxiety, and be at the same time better prepared to give prudent encouragement to his patient, "whose mental suffering in many cases equals if it do not outbalance her physical pains." He will learn, too, an important lesson, which cannot be too often enforced, "that most of the modern improvements in midwifery have resulted from a more correct appreciation of *the natural powers*; so, in the management of natural labour, the great improvement has been the absence of interference."

The following, though a plain common sense direction, we extract, in hopes that it may benefit certain inexperienced practitioners of midwifery, who often do much harm to their patients, and lay themselves open to disappointment and censure by disregarding, or rather not constantly recollecting it.

"It is very desirable to keep her (the parturient female) tranquil and cheerful, for which purpose *she should be told* of all that is favourable in her case, and all subjects calculated to depress should be avoided. In this matter much depends on the nurse, who should receive proper caution. I am satisfied, that in most, if not all cases, it is better to deal frankly with our patient, and not to make false promises in hopes of encouraging her to bear the pains. Let her be told that all is favourable, and that, *as far as we can judge*, the labour will terminate safely for herself and her child, and she will bear to be told, that she has yet some time to suffer. Moreover, as it is impossible to calculate with accuracy upon the duration of a labour, an assurance that it will be over in a certain time will, in all probability, issue in disappointment, and if so, in distrust either of our truth or skill."

The obstetrician who will wantonly trifle with the feelings of his patient, by enhancing the difficulties of her case, merely to establish for himself a character for uncommon skill, or who, ignorant of the real character of her case, will promise her "a speedy and safe deliverance from her pains" until the hour for affording her efficient assistance is almost entirely passed, is totally incompetent to fulfil the important and responsible duties of the office he has assumed. Nevertheless, such unworthy practitioners of the obstetric art it has been our misfortune more than once to encounter.

Dr. Churchill's directions for the management of the mother and child subsequent to delivery are, in general, marked with the same good sense as those for the conducting of the labour—with the propriety of a few of his directions we cannot, however, exactly agree. Thus, immediately upon the expulsion and removal of the child he directs a bandage to be applied

firmly around the mother, embracing the hips inferiorly and the whole abdomen. It is true that he adds,

"I do not know that we can consider the hinder absolutely necessary. Dr. Davis states that he has not used one for fifteen or twenty years, except in cases of flooding; it is, however, very useful at first in maintaining a certain degree of contraction of the uterus, and giving support to the abdomen, and afterwards in promoting a return to the natural condition of the uterine parietes, for which reason I think it deserving of rather more attention than is usually paid to it, at least after the first day or two. I believe that if it be duly applied during the time the patient keeps her bed, she will avoid that loose state of the integuments which gives rise to what is called 'pendulous belly.'"

We are opposed to the application of the bandage until after the expulsion of the placenta and all danger of hæmorrhage is removed by the full contraction of the uterus. We cannot conceive of any benefit that can result from the application of the bandage previous to the delivery of the secundines, to compensate for the inconveniences that may be produced by the disturbance of the patient necessary for its application. How the bandage can assist the contractions of the uterus and facilitate the expulsion of the placenta, or afford any additional security against the occurrence of internal hæmorrhage or of flooding, we cannot understand. Subsequently, however, when labour is completed the bandage affords a pleasing feeling of support to the patient, and perhaps may contribute towards a more complete retraction of the abdominal parietes. In all cases, however, the practitioner should assure himself of its proper application—the careless manner in which it is too often put on by the nurse or attendants, causes it to exert an unequal pressure upon the abdomen, from which more evil will result than if the bandage were entirely omitted.

In his direction for the management of asphyxia in new-born infants, the author advises "a proper tube" to be "introduced into the larynx, or a flexible catheter passed through the nose," for the purpose of artificially inflating the lungs. The use of the proper tube or flexible catheter is neither necessary nor proper. All that is requisite is to close the nostrils of the child with a finger and thumb, and to inflate the lungs from the mouth of the operator applied to that of the child, the latter being previously covered by a silk-handkerchief or piece of fine soft linen.

Some excellent observations and sound practical directions are contained in the next chapter (chapter 4), on "convalescence after natural labour."

We are pleased to find that the author teaches, that, the operation of the after pains is, "within certain limits, undoubtedly salutary," by preventing hæmorrhage, diminishing the size of the uterus, and expelling its contents. We trust that this will have a tendency to counteract the absurd and mischievous direction given in some of the books, and not unfrequently acted upon—namely, to "administer as soon as the patient is placed comfortably in bed a full dose of laudanum or a pill of opium and camphor, to prevent the occurrence of after pains."

The author directs the child to be applied early to the breast; "the sooner this is done the better, as the secretion and escape of the milk will be facilitated, the feverishness diminished, if not avoided, and a good nipple more easily formed than when the breasts are distended."

We copy the following observations of the author in relation to those cases in which "*the nervous shock*," which invariably occurs after labour, is very severe. They afford a very good specimen of the manner in which

the several subjects are treated by him, and at the same time recommend themselves to general attention from their importance;—the condition to which they refer being too often misunderstood, and in consequence erroneously treated.

"In these cases," remarks Dr. Chorchill, "the patient complains of great exhaustion; the senses are either unnaturally dull, or morbidly acute; the breathing is hurried, and panting, and the accordance between the respiration and circulation is broken. The aspect of the patient is that of a person in a state of collapse. The countenance is expressive of suffering, anxiety, and oppression. The pulse may be either very slow and laboured, or unusually rapid, very small, and fluttering. There are many cases, however, where the shock, though far from being so severe as in the case I have supposed, is quite sufficiently so to excite the fears of the medical attendant. Resection is long before it occurs, or it may take place imperfectly or excessively, and the patient remains for some time in a very weak condition.

"Under proper treatment, the patient will gradually recover from this state of exhaustion or collapse, unless the shock be excessive, and then death will supervene in a few hours. I have seen several cases of this kind; in one case, the labour was tedious, but terminated naturally; two others were instrumental deliveries; but in none where a *post-mortem* examination was obtained, was there either injury or disease discovered.

"A due estimate of the nervous shock is of great importance in severe cases; for in almost every instance, the progress of the convalescence is in inverse proportion to the amount of this disturbance.

"The best remedy in these cases is opium, either in a large dose or in small and repeated ones; it not only gives the patient a chance of sleep, the best restorative of all, but even if it fail in this, the system will be quieted, the respiration rendered more equable, the pulse slower, and more natural, and the relation between these two systems restored. The exhibition of stimulants—wine or brandy and water—in moderate quantities, is necessary; but we must be careful not to exceed, or they will do mischief instead of good. The amount of stimulants given in cases of collapse should have some reference to the probable reaction, as well as to the present state of the patient. Ammonia or musk are the best medicinal stimulants, and they may be combined with the opium. The diet of the patient, when the effects of the shock have subsided, must be nutritious. It may be necessary to postpone the application of the child to the breast for some days, or even to give up suckling altogether in some cases. All that has been said already upon the necessity of perfect quiet, applies with tenfold force to these cases of extreme nervous shock."

A very sensible note is appended by the editor, Dr. Huston, enforcing the observations of the author, from which we quote the following paragraph:—

"I have seen more than one instance in which there was reason to believe the life of the patient was sacrificed from ignorance of the condition here referred to. If the attention of the practitioner, at the time, be particularly directed to puerperal fever, he is liable to confound this exhaustion with the early stage of that disease. The cold extremities constitute the *chill*, while the haggard countenance, hurried respiration and frequent pulse, are regarded as conclusive evidence of a rapid peritonitis. Bleeding from the arm or by leeches, is the instant resort, and a few hours confirm the worst anticipations by the fatal termination, which the efforts of the attendant have but too successfully aided in producing."

The doctor draws here no "fancy sketch"—the thing has actually occurred within our own knowledge.

Dr. Churchill's next chapter (chapter 5) is devoted to the consideration of tedious labour. Some interesting tables are presented to show, 1st, The frequency with which the duration of labour is prolonged beyond

twenty-four hours. 'This was found in 23,758 cases to occur in the proportion of one to thirty-six, nearly. 2dly, 'The relative duration of each stage, in labours of twenty-four hours and upwards, in which the delay occurred in the first stage, and the results to the mother and child. 'The entire number of cases included in the second table are 143. "Of these, not one of the mothers died, although in some the first stage was enormously prolonged, and but ten of the children, one of which was putrid."

"If," the author remarks, "the relative length of the stages be examined, it will be found, that it did not follow, because the first was very long, that the second should be long also; and in many cases, not included in the table, when the second stage was delayed, the first was extremely short. Thus I think that, so far as it goes, this table proves the propositions with which I started, viz. that when delay is excessive, the relative duration of the two stages is destroyed, so that they bear no steady proportion to each other; and that a delay in the first stage involves very little if any danger, no matter how tedious it may be."

"The nervous shock is never in proportion to the length of the first stage of labour, but of the second."

Dr. Churchill considers the causes and treatment of the delay in the first stage of labour, under the heads of, 1st. inefficient action of the uterus—from constitutional weakness, a deranged state of the digestive organs, mental depressinn, uterine plethora, or irritation of the os and cervix uteri, &c. 2d. Undilatable os uteri. 3d. Excess of liquor amnii. 4th. Toughness of the membranes. 5th. Premature escape of the liquor amnii. 6th. Oblliquy of the uterus. Under each of these heads the practical remarks of the author are in the highest degree judicious, and admirably adapted to lead the student to correct views of the character and treatment of a class of cases which try the patience alike of the practitioner and patient—and in which the inexperienced obstetrician is very liable to be led into rash and hasty interference.

Under the first variety of tedious labour, that from inefficient action of the uterus, the author considers the effects of ergot, and the propriety and rules for its administration. From repeated trials he is prepared to bear witness to its efficacy in accelerating labour, though it is somewhat irregularly exerted; but he adds, "I have seen it do mischief." Dr. Churchill speaks of cerebral disturbance in the female, in different degrees, from a severe headache up to delirium, coma, and insensibility, follow its use. Although we have had an opportunity of witnessing the very extensive exhibition of ergot, and often in very large doses, we have never observed any of those phenomena produced by it. We have found it very frequently to excite nausea and vomiting, and when imprudently administered it is certainly very liable to destroy the child. Drs. Ramsbotham, Patterson, and Huston bear witness to its powers of *originating* uterine action;—this is contrary in our experience; we have seen it repeatedly given for this very purpose—but, invariably without effect.

The student will acquire, from the rules laid down by Dr. Churchill, in connection with the additional remarks of his able editor, a very correct knowledge of the circumstances under which the ergot may, with comparative safety, be employed as a means of accelerating labour, and those under which its employment is decidedly improper.

Dr. Churchill, after noticing the beneficial effects of bleeding in cases of rigid os uteri as originally recommended by Dr. Dewees, adds,

"Should the venesection only partially succeed, however, or in case it be not

desirable to have recourse to it, we may then try the tartar emetic, which I believe was first used in these cases by Dr. Evory Kennedy of this city. It is an exceedingly valuable remedy, perfectly safe, and very successful. It should be given in small doses, so as to excite and keep up a state of nausea, and it may be advantageously combined with a purgative—take, for instance, the following formula.—℞. Magnes. sulph. ʒi; infus. sennæ, ʒviijss; snimon. tart., gr. iij.; syr. zingib. ʒss; M. capiat cochlearia duo omni semihorâ, vel omnis horâ."

The sixth chapter is devoted to the consideration of powerless labour. That is, labour prolonged in the second stage from deficient uterine action. Upon this important subject the author's remarks and practical directions are extremely judicious, and marked by that prudent caution which is so important a trait in the accomplished accoucheur, and which is in no degree incompatible with promptness and decision when the true period for action has actually arrived.

The ensuing chapter treats of obstructed labour—1st. From mechanical obstruction in the soft parts—minute or imperforate os uteri; of obstruction from this cause there are but few cases upon record—carcinoma or scirrhus of the uterus; these cases are also extremely rare—narrow and undilatable vagina—tumours in the pelvis; a beautiful engraving is given to show the manner in which delivery may be obstructed by polypus uteri—diseased ovary; this is also illustrated by an engraving—vaginal cystocele; this very rare obstruction is made perfectly intelligible by an engraved illustration—calculus in the bladder; but few cases of this cause of obstruction are on record—vaginal hernia—swelling of the soft parts—imperforate hymen; of this Dr. Churchill has seen one case—rigidity of the perineum. The whole of this chapter is highly interesting—we must be permitted to copy the general rules laid down by Dr. Churchill for the conduct of such cases; they are replete with sound sense and prudence:—

"1. In no case need we interfere, when the obstacle can be overcome by the natural powers within a reasonable time. 2. That the less serious the mode of interference the better; so that, if the natural efforts are insufficient, we should endeavour to push the obstacle out of the way, to remove it; or to puncture it. 3. That if the uterine efforts be vigorous, the mere removal of the obstacle will enable them to complete the labour. 4. That in some cases, besides removing the cause of delay, it is necessary to employ extracting force; and in such cases, the less violent the operation the better; thus the vectis—if effectual—would be preferable to the forceps; the forceps to the crochet, and the crochet to the cesarian section. 5. But in our estimate of the risk of these operations, we must not omit the time they occupy, with reference to the condition of the patient; thus the time gained by the forceps may render it more useful than the vectis. 6. When the forceps cannot be used, no false humanity should make us hesitate to destroy the child. I assume, of course, the necessity for an operation in time to save the mother; because its life is sacrificed already, and both it and the mother will be lost, if we do not terminate the labour."

Obstructed labour from deformity of the pelvis is the subject of chapter 8;—which leads at once to the consideration of obstetric operations, (chapter 9.) In relation to the operative department of midwifery there has existed a greater amount of controversy than with respect to either of the others; and even now, upon many of the questions connected with it—the nature of the cases in which artificial assistance is demanded—the proper period for resorting to it—the nature of the assistance demanded—and the form and construction of the proper instruments—there still exists not a little discrepancy of opinion among the masters of the art. Each of the operations are examined by Dr. Churchill in detail. The induction of

premature labour, version, the use of the vectis, and of the forceps, craniotomy, the cephalotribe, and the cæsarian operation. The circumstances under which one or the other is demanded, are minutely and cautiously considered—and the rules for the performance of each are clearly and fully detailed.

The chapter on the induction of premature labour is one of the most interesting in the whole volume. The author, after presenting a brief but very satisfactory abstract of the opinions and experience of all the leading authorities upon the subject, concludes, that from the facts and testimony adduced, the three leading principles of the *morality, safety, and utility* of the operation are fully established—and then proceeds to inquire as to the cases in which it is available. On this particular Dr. Churchill has collected an interesting mass of facts, and has presented them in a manner calculated to clear it of many of the difficulties in which it is generally supposed to be involved; the objections to the operation are fairly, and we think satisfactorily answered, and we trust that our author's labours may be the means of bringing the operation into more general use—for it is unquestionably adapted, in the cases in which it may be resorted to, to save the patient much suffering and anxiety, and very frequently, to contribute to the safety of the mother and often of the child also. The author's examination of the several modes that have been proposed for the induction of premature labour, though concise, is well calculated to lead to their just appreciation.

Version or turning comes next under consideration (chapter 10). The whole of the chapter devoted to this operation is replete with valuable information. The mass of statistical and other facts the author has collected in reference to it are well calculated to lead the student to correct views in relation to its value—the cases in which it should be performed, and the proper period at which it should be resorted to. The pictorial illustrations of the manner of conducting the operation are accurate and satisfactory. The chapter concludes with a summary of the difficulties attending its performance, and the danger to the mother and child that may result from it.

The vectis or lever (chapter 11) Dr. Churchill considers may be advantageously employed in cases in which the head, having descended into the pelvic cavity, is arrested in its progress, simply by the inefficiency, not absence, of labour pains, and when the patient is beginning to show symptoms of constitutional or local disturbance; and in cases of convulsions, or other accidents occurring during labour, provided only that the pains continue. The method of operating is laid down with great clearness, and illustrated by an admirable engraving. The dangers that may result from the use of the instrument are stated aphoristically in the conclusion of the chapter.

The important subject of "the forceps" comes next under consideration (chapter 12): the invention of this instrument the author considers to be "the greatest improvement that has ever occurred in midwifery." A short history of the introduction of the instrument, and of the modifications it has undergone is first presented, followed by a brief statement of the object of the operation, and the nature of the aid afforded by the forceps. The statistics of the operation are given next, in tables showing, first, the frequency of the operation among British, French, and German practitioners; by which it appears, that among British practitioners 126 forcep cases occurred in 45,634 cases of labour, or about 1 in 362. Among the French 277 forcep cases in 44,736 cases of labour, or about 1 in 162:—and

among the Germans, 1702 forcep cases in 261,224 cases of labour, or about 1 in 153½:—adding the whole together, we find 2105 forcep cases in 351,594 cases of labour, or about 1 in 167.

The next table exhibits the results of the operation to mother and child. From the whole number of forcep cases in which the result to the mother is stated, we shall find, that among the British practitioners in 302 forcep cases, 14 mothers were lost, or 1 in 21½:—among the French and German practitioners, in 479 cases, 35 mothers were lost, or about 1 in 13½:—whilst of the children, the British statistics give 64 lost in 296 cases, or about 1 in 4½; and foreign statistics 111 in 575 cases, or 1 in 5. The total result is, that in 781 forcep cases, 49 mothers were lost, or about 1 in 16; and in 871 cases, 175 children were born dead, or about 1 in 5.

"It will be admitted, I think," the author remarks, "that these tables exhibit British practice in a very favourable light;" "very favourable," Dr. Huston observes in a note, "if we say nothing of crochet cases."

"It would be unjust," Dr. Churchill adds, "to compare the frequency of forcep cases among the Germans and British, without recollecting the minor degree of mortality amongst the children in the practice of the former, and the very much smaller number of crochet cases. It would seem, that although the Germans use the forceps much more frequently than we do, they often thereby avoid a much more fatal operation."

The author next compares the results from the use of forceps with the results from the use of the crochet. In the latter of course *all the children are lost*, and *one in five* of the mothers; whereas, by the forceps *four out of five of the children*, and *twenty out of twenty-one* of the mothers, are saved; and "if we had more minute reports, the success would undoubtedly appear much greater."

The special advantages of the forceps are next considered, with an examination of the objections that have been made to their use. In proceeding to a review of the cases to which the forceps has been considered applicable, Dr. Churchill sets out with the following important position:

"That in no case is the forceps, or, indeed any instrument to be applied, until we are perfectly satisfied that the obstacle cannot be overcome by the natural powers with safety to the mother and child."

A rule that should be inscribed in large letters on every case of obstetrical instruments; nothing is certainly more reprehensible than to resort to instruments, in any instance, merely to shorten the labour, or as it has been stated in our hearing, "to save the mother so many hours of pain."

The proper period for operating is an important question. Upon the early resort to instrumental assistance, in the cases in which it is decided to be necessary, will in a great measure depend the safety of the child, and to a certain extent that of the mother also; we are to recollect that the Germans operate more frequently, and at an earlier period than the British, and that they have fewer crochet cases. The remarks of Dr. Churchill upon this point are short but pertinent. We believe, however, that in many cases, the safety of mother and child will be better secured by operating at even an earlier period than that advocated by the author, though as a general rule, the views expressed by him are perfectly sound.

The rules for the application of the instrument follow next in order—they are sufficiently clear and accurate, and are beautifully illustrated by engravings.

A very valuable addendum to this chapter is from the experienced and

able editor, Dr. Huston; chiefly in reference to the form and construction of the forceps intended to act upon the head at the upper strait. The instrument advocated by this gentleman is that of Siebold with certain modifications, principally in adding an inch to the length of the blades, shortening somewhat the handles, doubling the width of the fenestra, and giving a greater sweep to the second curve. The instrument is calculated in every case, to be passed along the *sides* of the pelvis. A drawing of this forceps is given.

An account and drawing is also given of a modification of the long French forceps, contrived by Professor Hodge, of the University of Pennsylvania, whose views as to the mechanical properties which are necessary to adapt the instrument to all cases of difficulty that require its application are in accordance with those of the editor.

Craniotomy; its history; the instruments employed; the object of the operation; its nature; statistics; its comparative advantages; the cases in which the operation is demanded; the period of labour when it should be performed; the mode of operating and the difficulties and dangers of the operation, are the subjects of the next (13th) chapter.

From the statistical tables, it appears that among British practitioners, there were 218 crochet cases in 47,851 cases of labour, or about 1 in 219. Among the French, 30 in 36,169, or 1 in 1,205 $\frac{2}{3}$; and among the Germans, 132 in 256,655 labours, or 1 in 1,944 $\frac{1}{4}$; forming an aggregate of 380 crochet cases in 340,675 cases, or 1 in 896 $\frac{1}{2}$. The mortality to the mother was 52 in 251, or about 1 in 5. Its advantages over the cesarian section are very decided; the mortality from the latter being 1 in 2 $\frac{1}{2}$ of the mothers, and 1 in 3 $\frac{1}{2}$ of the children; but it falls short, greatly, in point of advantage to the induction of premature labour, which, timely performed, may supersede the necessity for embryotomy, and from which the mortality to the mother is 1 in 50, while more than half the children are preserved.

The whole of this chapter is deserving of an attentive study on the part of the practitioner as well as of the pupil of obstetrics. When unfortunately reduced to the disagreeable necessity of resorting to it as the only means of saving the life of the mother, the pictorial illustrations furnished in the chapter before us, will afford useful aids in enabling the young obstetrician to understand the manner of performing the operation.

The cesarian section is an important and interesting subject. In relation to the propriety and comparative advantages of the operation, a very great discrepancy of opinion exists, and among contending statements of its favourable or unfavourable results there is much difficulty of arriving at correct conclusions in relation to it. After a succinct history of the operation, Dr. Churchill proceeds to consider its objects, which are "to afford a chance of escape to the mother, and of life to her child; in cases where the child cannot be extracted through the natural passages by any means at our command; to extract the child so promptly as to afford it a chance of life, when the death of the mother has taken place suddenly, and to relieve the mother from the risk of fatal inflammation, owing to the presence of the fœtus in the abdominal cavity, acting as a foreign body. Two tables are presented, the first showing the number of successful cases on record, with the number of hours the mother was in labour, and, when mentioned, the cause of its performance. The second table shows the unsuccessful cases, with similar details. From these tables it appears that

in British and American practice, out of 43 cases, 12 mothers were saved and 32 lost, or about three-fourths; out of 41 cases where the result to the child is mentioned, 23 were saved and 18 lost; or 1 in $2\frac{1}{3}$. In the practice of continental obstetricians, in 371 cases 154 mothers died, or about 1 in $2\frac{1}{3}$. Out of 189 of the cases where the result to the child is given, 50 were lost, or nearly one-fourth. Taking the aggregate of all these cases, we have 414 in which the cæsarian operation was performed, 229 mothers saved, and 186 lost, or about 1 in $2\frac{1}{3}$; and out of 230 of the children thus delivered, 162 were saved, and 68 lost, or about 1 in $3\frac{1}{3}$.

The conclusions of the author in relation to the operation are extremely sound.

"It does," he remarks, "afford a chance to both mother and child, and, therefore, we may be justified in having recourse to it; but, as the danger is much greater than from any other operation, we should not be warranted in performing it, if there were a prospect of success by any other means. This, then, constitutes the *sole advantage* of the operation, that in cases where we cannot deliver the patient by any other means, and when, consequently, both mother and child would inevitably die, if left unaided, we may afford each a chance, by performing the cæsarian section."

Symphyseotomy (chapter 15) he considers as under no circumstances either advantageous or proper.

Malpositions and malpresentations are the subject of chapter 16. Face presentations, according to the tables given by Dr. Churchill of the British, French, and German practice, occurred 626 times in 129,489 cases of labour, or 1 in 206 $\frac{2}{3}$ cases. In 344 cases of which the results are given, 248 were delivered naturally, and 77 required artificial assistance; viz. 42 version, 20 forceps, and 15 craniotomy. In 150 cases, 3 of the females died, or 1 in 50; and of 216 children, 14 were lost, and 15 destroyed, or about 1 in 7. The author recommends that no assistance be given in this form of malposition, unless there should be a disproportion between the size of the head and the pelvis, or the pains should become insufficient, or accidental complications occur; then if within reach, the forceps will probably be the best instrument. Three engravings are given illustrative of face presentations.

The forehead towards the arch of the pubis. From the statistics given, it appears that this malposition occurred 72 times in 23,050 cases of labour, or about 1 in 320 cases. In 22 cases, 9 of the children were lost. There is nothing to be done unless under the same circumstances as require assistance in face presentations, where the forceps will become necessary; a pictorial illustration is given of this malposition.

Of the malpresentations, that of the breech occurred 1 in 53 $\frac{1}{3}$ cases; of the inferior extremities, 1 in 90 $\frac{1}{3}$; of the superior extremities, 1 in 261 $\frac{2}{3}$ cases of labour. In 598 cases of breech presentation, 177 children were lost, or 1 in 3 $\frac{1}{3}$. In 537 presentations of the inferior extremities, 205 of the children were lost, or about 1 in $2\frac{1}{3}$. In 240 presentations of the superior extremities, 125 of the children were lost, or about 1 in 9. These several malpresentations are illustrated by eight engravings.

The description, diagnosis, and practical rules for the management of the presentations enumerated that are given in the chapter before us, are marked by the author's usual accuracy, clearness and judgment. From a careful study, correct views of their nature, phenomena and management cannot fail to be acquired.

The chapter closes with a consideration of compound presentations; the hand or arm, and head, or the feet and hands; with pictorial illustrations.

Plural births are treated of next (chapter 17). We learn from the statistics furnished by the author, that in 161,042 cases of labour occurring in Great Britain, 2,477, or about 1 in 69 were cases of twins, and 35 of triplets, or 1 in 4,473; in 36,570 cases occurring in France, 332 or about 1 in 110 were cases of twins, and 6 of triplets, or 1 in 6,095. In 251,386 cases occurring in Germany, 2967 or about 1 in 84 were cases of twins, and 35 of triplets, or 1 in 7,185 nearly. Adding all these numbers together, we have in 448,998 cases, 5,776 of twins, or 1 in $77\frac{1}{2}$; and 77 of triplets, or 1 in 5,831. In 697 cases of twins, 1,394 children, 417 were lost, or about 1 in $3\frac{1}{2}$; and of twelve cases of triplets, 36 children, 11 were lost, or 1 in 3. Tables are also given of the sexes and presentations in twin cases.

The directions of Dr. Churchill for the management of twin and triplet cases are clear and judicious.

Some excellent remarks will be found also in this chapter, on cases of fœtal monstrosity, with directions for their management; one illustration is given.

Prolapse of the funis umbilicalis (chapter 18) occurred 401 times in 98,512 cases of labour, or about 1 in 245 $\frac{1}{2}$. In 355 cases, 220 of the children were lost, or more than one half; a larger mortality, Dr. Churchill remarks, than we find in any other order of *practicable* labour.

The various plans of treatment proposed by different writers are passed in review and an estimate given of the practicability and advantage of each. The mode of operation in these cases will, however, in a great measure depend upon the particular circumstances of each case.

Retained placenta (chapter 19) is but a relative term; different authorities giving a different period, as that during which it is proper to wait for the expulsion of the placenta by the natural efforts of the uterus, before any attempt is made to expedite its delivery, or to remove it by the hand; consequently the statistics of this form of complex labour are of little value. The rule given by the author in regard to the delivery of the placenta, is an admirable one, and if generally acted upon, would save the patient from any danger resulting from premature and rash interference on the one hand, or from hemorrhage or the risk of uterine phlebitis on the other. It is this:

"We do not interfere when the uterus is adequate to the expulsion, but when we are convinced that its efforts are suspended or inadequate, we extract it to avoid the risk of hemorrhage or inflammation of the uterus."

The treatment will depend in a great degree upon the cause of retention; and will be found clearly laid down in the chapter under consideration.

Flooding (chapter 20): this is an important subject, and as such has received its full share of attention on the part of our author. In 68,962 cases of labour, flooding it appears occurred 424 times, or about 1 in 162 $\frac{1}{2}$. In 537 cases, 97 mothers, or about 1 in $5\frac{1}{2}$ were lost. In 443 cases, 109 of the children, or 1 in 4 nearly, were lost.

The cause of accidental hæmorrhage, that is, where the placenta is in its ordinary situation, is the separation of some portion of it from the womb, and the laceration of its vessels. The exciting causes, the symptoms, diagnosis, and treatment are very fully and clearly stated.

Unavoidable hæmorrhage results from the implantation of the placenta



over the os uteri, or at the cervix uteri. The symptoms, diagnosis and treatment are given with equal fulness and clearness.

Hæmorrhage after delivery receives a short notice at the close of the chapter.

Convulsions forms the subject of chapter 21. Dr. Churchill divides convulsions, as they occur during gestation, or immediately before, during, or after parturition, into the *hysterical*, the *epileptic*, and the *apoplectic*.

Of puerperal convulsions there occurred 159 cases in 96,903 labours; or 1 in about 609. In 152 cases of convulsions, 42 mothers were lost, or more than a fourth. The great majority of the cases on record occurred in first labours.

Dr. Churchill has presented a very able account of the causes, symptoms, termination, pathology, diagnosis and treatment of the two forms of puerperal convulsions, the epileptic and apoplectic, with a copious reference to the opinions and experience of the leading writers on the subject.

Rupture of the uterus and vaginal, vesico-vaginal and recto-vaginal fistula, and laceration of the perineum come under consideration in chapter 22.

Rupture of the uterus occurred 65 times in 42,768 patients, or about 1 in 657. In 75 cases it occurred 9 times in the 1st pregnancy, 14 in the 2d, 13 in the 3d, and 37 times in the 4th or subsequent pregnancies. In 68 cases the accident proved fatal to the mother in all but six.

The author presents a very interesting account of the causes of ruptured uterus; his account of its pathology, symptoms, terminations, diagnosis and treatment is also admirably calculated to lead to correct views.

The other subjects of this chapter receive from Dr. Churchill that attentive consideration which their importance demands.

Inversion of the uterus is the subject of the ensuing chapter (23d); and the remaining four chapters are devoted to a consideration of the principal diseases of the puerperal state, puerperal fever, phlegmasia dolens, puerperal mania, and ephemeral fever; all of which are treated in the same clear, cautious, and able manner which distinguishes every portion of the volume before us; we are acquainted, indeed, with no work better calculated to induct the pupil into a knowledge of these respective subjects, or in fact, of all the subjects it comprises, and to prepare him for the study of the standard treatises on the nature and management of the several accidents of the parturient and puerperal states, and the theory and practice of midwifery generally; while the practitioner will find it a useful volume for almost daily reference. Forming as it does a kind of analytical index to the various facts and observations on each of the subjects of which it treats, and presenting a very fair comparative view of the opinions and experience of the great masters of the obstetric art; with a variety of interesting and valuable matters, derived from numerous sources, and these often of difficult access; the volume of Dr. Churchill will, we are convinced, obtain not merely a place in the library of every physician engaged in the practice of midwifery, but will lie constantly upon his table ready for frequent reference.

The notes and addenda of Dr. Huston are in general, valuable, and invariably constitute a useful addition to the work.

We have already referred more than once to the pictorial illustrations; these are really beautiful as works of art, and give to the student a correct idea of the descriptions in the text, which, notwithstanding they are throughout remarkably clear and explicit, would, to the beginner, without

the illustrative engravings, convey but indistinct ideas of the subjects to which they refer.

D. F. C.

ART. XII.—*Principles of Human Physiology, with their chief applications to Pathology, Hygiène, and Forensic Medicine. Especially designed for the use of Students. With over one hundred illustrations.* By WILLIAM B. CARPENTER, M. D. &c. First American edition, with additions by the author, and notes and additions, by MEREDITH CLYMER, M. D., &c.: 8vo. pp. 618. Philadelphia: Lea & Blanchard, 1843.

THE rapid multiplication of treatises on physiology, within a few years past, is an unquestionable evidence of the increased attention which the science has received of late, more especially on the part of the medical profession, and of its acknowledged importance as the only foundation upon which can be built a correct theory of the nature and causes of the morbid changes that occur in the functions and organization of the human body. How far "the making of many books" is calculated to increase our acquaintance with the true principles of physiology is a question with which we have at present nothing to do, our only duty, as reviewers, being to examine into the merits of the several treatises as they successively appear. New works on physiology would, however, seem to be more frequently demanded than upon almost any other of the natural sciences. Its cultivators commenced to theorize long before they learned to observe, and hence every new accession of facts, or of supposed facts, was made the excuse for the erection of a new theory, which was scarcely announced before it required to be modified by the results of more recent discoveries—and even now, the rapid progress of the science, and the numbers actively engaged in its cultivation, demands, that at short intervals, a careful collation should be made of the established facts with the conclusions based upon them; while improvements in the arrangement of the materials already in our possession, and in the manner of teaching the principles of the science unquestionably call also for repeated new publications in relation to it.

The work of Dr. Carpenter is among the latest that has appeared; and though its pretensions are less than many of those that have immediately preceded it, it appears to us to be well calculated to communicate to the student clear and accurate views of the principles and leading facts of human physiology. It is "sufficiently elevated in character" to represent the present condition of the science—"sufficiently compendious" for the limited time at the disposal of most students, and "sufficiently practical in its tendency" to lead its readers to the useful application of the facts and principles it places before them.

We fully agree with the author that the present treatise presents a very fair digest of the latest and most satisfactory information on the subject of which it treats. His endeavour has evidently been "to bring together the valuable facts and principles, scattered through the best of the numerous monographs, that have recently been published on special divisions of physiology and medicine; and to reduce these *disjecta membra* to that